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Abstract:

COVID-19 provided significant challenges for community services and care homes. Residential and nursing care patients are considered highly vulnerable to the coronavirus due to their physical needs and environmental factors. Significant concern was raised with PPE availability and appropriate training and support in local care homes. Members of the district nursing team and community services formed a team to deliver face to face training and support to care home workers to improve PPE adherence and reduce risks of transmission. Visits were offered to all 46 care homes in the locality and over 55 visits for teaching were performed in the first month. Challenges were faced with managing and prioritising frontline clinical duties. Feedback was overwhelmingly positive and care staff benefited from face-to-face delivery of education to support best practice.

Keywords:

PPE, Teaching, District Nursing, Community, Care Homes, Infection Control

Key Points:

- Competent PPE usage is vital to reduce transmission of COVID-19 and other diseases
- Care home residents are amongst the most vulnerable of patient groups
- NHS providers need to work collaboratively with external community partners to achieve best practice
- PPE competence requires ongoing supervision and support to ensure correct use
- NHS staff have a responsibility to promote best practice through education and guidance

Reflective questions:

1. Are you up to date with best practice guidelines for PPE in your area?
2. What are the main barriers to appropriate PPE usage and how can you overcome these?
3. Why is it important to provide support, guidance and education to those working outside the NHS?
4. How as professionals can we maintain our competence and improve our understanding with infection control?

Introduction:

The COVID-19 pandemic has provided significant challenges for care homes across the nation. Care homes can be residential, nursing or dual registered. With a combination of often confusing advice and insufficient recognition of the needs of care providers, care home workers and their residents have experienced many of the devastating effects caused by the coronavirus. At the time of the project starting in April 2020, 28.3% of all United Kingdom (UK) COVID-19 deaths were among care home residents (ONS, 2020a). Largely, this is due to the complications of the virus affecting those who are elderly and often have multiple comorbidities. Other factors include the typical nature of care home environments, with many residents freely walking and meeting in social areas. Barnett and Grabowski (2020) highlight increased risks to those people requiring a substantial amount of direct care, often those in nursing homes due to their increased clinical need. This makes care homes a high-risk site for transmission, as seen with influenza and norovirus (Green et al, 2020). Evidence from Tulloch et al.

(2020) showed other risk factors for care homes included the use of agency staff who may not be as well versed in the protocols of the care home. Further research also found that care home staff moving between care homes provided a potential increased risk (Bonanad et al, 2020) which may be required due to the increased demand across sites. However, in February, Public Health England (PHE, 2020) stated in their now withdrawn guidance "there is no need to do anything differently in any care setting at present". This was contradictory to the government's own Scientific Advisory Group for Emergencies (SAGE, 2020) which also stated in February it was possible there is already sustained transmission in the UK and that it would soon become established in coming weeks.

Care homes were initially considered a low transmission risk according to government guidance produced in February and March 2020, with PHE (2020a) stating in a now withdrawn document "It is therefore very unlikely that anyone receiving care in a care home or the community will become infected", also supporting the transfer of untested patients to care home settings from NHS hospital beds. Only later in April 2020 did the guidance change, stating all discharged patients would be tested prior to leaving secondary care. At this point over 28,000 elderly patients had been discharged from hospitals to care homes, although no statistical evidence was available to account for how many potential cases of Coronavirus were transmitted this way (Butcher, 2020). In mid-April, 5,700 care home residents since the start of the pandemic had died with their death being attributed to COVID-19, with a total of 20,000 associated deaths by July 2020. In the Vivaldi study (ONS, 2020b) it was estimated 55.6% of care homes had at least one case of coronavirus, with just under 20% of care home residents testing positive in homes with at least one confirmed case.

In March 2020, the government launched the National Supply Disruption Response (NSDR), which was aimed at creating a centralised line for health and care providers to raise concerns regarding Personal Protective Equipment (PPE) shortage. PPE includes hand hygiene, gown and/or apron, mask, goggles and/or face shield and gloves (Agalar and Ozturk, 2020). On the 10$^{th\ of}$ April, a PPE action plan (DH, 2020) was formed which looked at ensuring appropriate distribution to care homes through local authorities. However, it wasn't until May 2020 that care homes had their own bespoke supply routes and specific guidance. For many, this was late in the day and not representative of Health Secretary Matt Hancock's view in May's Downing Street briefing that stated the government had thrown a "protective ring round care homes at the start of the pandemic" (Stevenson, 2020).

Some procedures that are considered aerosol generating may require higher-specification equipment. This can include caring for patients on high flow oxygen and those who may be intubated or requiring suctioning, a skill many carers and care home nurses administer. Recognition of how COVID-19 spreads is imperative to its prevention; it was initially believed COVID-19 was spread through droplet transmission as evident with influenza, however the rapid transmission indicated it can spread via airborne particles (Centre for Disease Control, 2020; Holland, Zaloga and Friderici, 2020).

Staff working within district nursing teams had identified some issues with PPE usage within many care homes, which was being raised internally and communicated to home managers. Some of the issues raised included some care staff not wearing aprons when providing personal care and multi-use of equipment such as thermometers between patients. An abundance of guidance had been made available from different bodies including the National Institute for Health and Care Excellence (NICE) and PHE however the incorporation of this vital education into frontline practice was fast becoming a priority.

<u>The Innovation:</u>

Due to the concerns raised with care homes and appropriate PPE attainment, the author was authorised to lead a team to provide direct education and support to all residential and nursing care homes under our remit within the Clinical Commissioning Group (CCG). At the time of the project starting, there was no formal training plan in place to support care home staff that involved direct support and education relevant to COVID-19 and PPE. In the authors locality, there are 46 care homes providing social/nursing care to residential patients. The project plan was to contact all 46 care homes offering face to face direct training and support. This project was considered a priority from senior management in order to reduce potential spread and protect vulnerable patient groups.

The team was led by the author and included a fellow Specialist Practice Teacher (SPT) from the District Nursing team and a Nurse Practitioner (NP) from the Specialist Care Home Support Team (SCHST). Both SPT's and NP were also working as part of their regular roles throughout, with the NP recently joining from an Infection Control team in the region. Many staff members had changed roles and been redeployed elsewhere within the trust, some of whom were allocated to district nursing due to their increasing demand on the frontline. Although remotely working in their office base, the SCHST provided telephone consultations to the care homes in the region to monitor and offer any support that was needed. At any one time, the PPE Support Team contained 4-5 nursing staff. The dynamic of this team changed throughout the project, as redeployed staff who would form part of the PPE Project Team were called back to their usual roles often after a period of weeks. In total, we had 7 different members of the team throughout the project lifespan.

Live teaching and educational delivery have been compromised significantly during the pandemic. The benefits of face-to-face teaching delivery are well documented particularly with practical tasks (McCutcheon et al, 2015) allowing for the benefits of visual observation of correct procedure supported with evidence-based recommendations. The delivery of these training sessions also allowed the team the opportunity to work in alliance with our local care providers. Care homes are an integral part of the adult social care team and work closely in conjunction with a range of NHS teams and specialists. It has been highlighted that people working within the adult social care sector have felt undervalued throughout the pandemic, almost 'second class to a world class NHS' (Stephenson, 2020).

It has been well documented in the media care homes have faced considerable difficulty throughout the pandemic, even facing criticism from the Prime Minister who stated that "too many care homes didn't really follow the procedures in the way that they could have" (Butcher, 2020). This caused significant resentment, with their comments being described as "neither accurate nor welcome" from senior representatives (Rayner, 2020). This project offered an opportunity to further develop links between NHS and social care providers, offering not just face to face education directly in the care home but also support to those working with a demographically highly vulnerable group of people.

Implementation:

The sessions were planned for 30 minutes, allowing for a realistic amount of time to allow care workers to leave their duties. The sessions targeted all care home staff, including care assistants, cleaners and chefs as well as others. Sessions were also offered consecutively, so at one visit train as many staff as possible. Many care homes arranged for their off-duty staff to come in and attend, a testament to how important care home managers and their staff viewed face to face training. All care home managers were contacted by telephone and email, informing them of the PPE Training Team project and what we could offer the home and its staff. Prior to any session, a risk-assessment was

undertaken by the session trainer to account for safe social distancing and appropriate PPE usage to protect other attendees, in line with current government guidance. All these details were recorded onto an Excel database to help track and record information supplied form the care homes, including the number of active cases, staff numbers and available dates for the training team to attend.

The author created a teaching session plan, which would incorporate the following:

- Introduction to COVID-19
    - Informed attendees what the training would include and context to the current impact COVID-19 is having both nationally and in care homes
- Prevalence, signs and symptoms
    - Number of cases (updated frequently), how to spot suspected COVID-19
- Live donning and doffing demonstration
    - Visual exercise showing best practice (PHE, 2020)
- 'Myth-busting' discussion
    - Focused on dispelling common myths, such as the effect of antibiotics and other medications not scientifically proven to be of benefit
- Wellbeing of care home staff
    - How care home staff can protect themselves, colleagues and maintain good health
- Q&A opportunity

The author consulted the most recent guidance available from PHE (2020b), specifically the process for 'donning and doffing'. The introductory information was taken from the Office of National Statistics and updated continuously throughout. Information about signs and symptoms was taken from NHS UK (2020) as well as information relevant to myth-busting. Guidance on how care home staff can protect themselves was taken from the PHE (2020b) guidance 'COVID-19 How to work safe in care homes'. As per local trust recommendations, it was advised that hand decontamination using alcohol gel should take place during every stage of doffing as this was not stated in the PHE guidance. This reduces the risk of spreading any potential contamination through touching clothing and hair.

Many myths have circulated throughout the pandemic, often spread via social media and general gossip. The teaching session aimed to dispel any contemporary myths that have recently presented themselves, such as the suggested benefits of Hydroxychloroquine which have been found to have no difference in mortality rates (Jorje, 2020). This part of the session offers the opportunity for care staff to share any myths or stories they may be aware of, with the session provider aiming to address any ambiguity.

The focus on the well-being of care staff was a highly pertinent part of the session. District nursing teams are often highly involved with care homes and form good working relationships with staff and patients alike. Supporting care staff is essential and fostering closer working relationships will only further aid team-working and the quality of care being provided to patients. The author has had the benefit of such positive working relationships and highly motivated to both support and advocate for care workers. Implications of the pandemic for care workers are also of great concern. GMB (2020) highlight care home workers are three times more likely to be on zero-hour contracts than public sector workers, potentially impacting benefits such as sick and holiday pay, with some workers feeling pressured to attend work even when unwell (Stevenson, 2020). Care workers are also statistically more likely to have a higher risk of death from COVID-19, being twice as likely compared to the rest of the population (Daly, 2020). Schuklenk (2020) elaborated further, warning many frontline workers would unfortunately die due to exposure to the coronavirus. In order to protect the most vulnerable, we need to protect those caring for them.

Evaluation:

Of the 46 care homes in the locality, a total of 30 homes accepted the offer of face-to-face training and support. In the first month of the project starting, the team delivered over 55 training sessions, some of which were consecutive in the same care home to target as many staff as possible during one visit. After the first month, a further 18 sessions to care homes although they were now more sporadic, due to targeting so many within the first month. Six of the care homes had requested further training updates between 2-3 months of the project starting and initial training being delivered. However, only three of these sessions took place as care homes had cancelled. Registers were taken at sessions and certification supplied to each member of staff who attended, signed and completed by the session trainer. A specific number of staff who received training at each session was not recorded, however the estimation for the number of care home staff directly trained by the PPE Training Team was 250-300. Attendees were asked at the end of the session for feedback which the session trainer would document however formal feedback sheets were not left for staff to complete due to infection control purposes. Care home managers were invited to feed back any responses via email if desired.

The project caused some challenges, mainly logistically. There was often negotiation between staff availability between the PPE team to ensure we had staffing to deliver sessions at the convenience of the care home schedule. Certain members of the PPE Training Team were highly flexible with their hours, visiting from 7am and up until late evening in order to attain best attendance in line with the care home dynamics. The use of Microsoft Excel caused some difficulties as it was a shared folder, requiring all staff to keep it regularly updated and as 'live' as realistically possible. At points during the project, there was intervals when the system was not up to date as staff had not had the chance to record information prior to going off work, accounting for leave and days off.

The feedback from care home staff and managers was overwhelmingly positive. Many care home staff voiced their concerns that they had 'just been left' throughout the pandemic. Consistent feedback also included the amount of different information from different visiting professionals, often contradictory and ever-changing. No negative feedback was received throughout the training delivery about the sessions provided, however there was no online tool for feedback which may prevent any attendee from feeding back any negative comments. However, the response from care homes requesting further training was deemed to be a positive outcome. The staff involved in the PPE Teaching Team commented on the often positive and welcoming reception from care home workers and their engagement in sessions.

Discussion:

Due to the significant time restraints faced, the project had a significant frontline impact in the initial month of its creation. As the staff members involved also had their other duties, there was often negotiation around availability and the need to try meet requests from care homes. It would have been beneficial to have a full-time regular team where observation and feedback based on assessed performance could have taken place, like a competency-based assessment. Russel et al (2020) discussed how compliance with Infection Prevention and Control (IPC) practices may be claimed to be higher than when being observed, potentially attributable to people's perceptions around IPC. Competency based systems were rolled out later in 2020 through the CCG focusing on competency-based systems, although this is mainly performed virtually. Face to face teaching in the community setting allows for not just the sharing of knowledge and skills, but also the opportunity to work with and build connections with the providers we work with. District nurses and the community

professional teams rely significantly on colleagues in the social and private healthcare sector and need to continue finding ways to develop those networks to contribute to the integrated care agenda to meet the needs of our vulnerable patient groups.

Conclusion:

COVID-19 will be an ongoing issue despite the incredible achievements made with vaccination. PPE and IPC awareness and competence remains high on the healthcare agenda and must be an ongoing skill, not to be viewed complacently regardless of what tier or transmission rates are being recorded. Safe and effective use of PPE will protect patients and care staff from a range of contagious and infectious illnesses, prolonging life and improving health. Pandemics are not in essence unprecedented, and history shows how devastating their impact can be. Ensuring adherence to evidence-based protocols and business continuity planning for such occurrences must be a priority for all social and health care providers.

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